

IN THE UNITED STATES PATENT AND TRADEMARK OFFICE

**PRE-APPEAL BRIEF REQUEST FOR REVIEW**

Mail Stop AF  
Commissioner for Patents  
P.O. Box 1450  
Alexandria, VA 22313-1450

Dear Sir:

In reply to the Final Office Action mailed December 11, 2006 (the "Final Office Action"), Applicants respectfully request a panel review of the final rejection under 35 U.S.C. § 103(a) discussed in the remarks below. No amendments are being filed with this Request. This Request is being filed concurrently with a Notice of Appeal.

Claims 12 and 22 have been cancelled and claims 1-5 and 25-27 have been withdrawn from consideration. Claims 6-11, 13-21 and 23-24 have been finally rejected under 35 U.S.C. § 103(a) as purportedly being obvious over U.S. Patent No. 6,871,022 to Xu (“Xu”) in view of U.S. Patent No. 6,278,818 to Laming et al. (“Laming”).

### Legal and Factual Deficiencies

#### **1. Failure to Identify All Claim Limitations in the Cited References**

In the Final Office Action, the Examiner has, again, failed to establish that the cited references, when combined, teach or suggest all the claim limitations required by each of the rejected claims. For example, in the Office Action mailed May 22, 2006, the Examiner rejected claims 6-11 and 13-14, asserting that:

Xu discloses in Figures 6, 16A-B, and 19A-B, an optical add/drop module ... comprising [a] drop portion ... [and an] add portion ... wherein the add portion comprises: [a] first stage of interleavers ... and a final stage including a thin film interleaver ...

*Office Action mailed May 22, 2006, page 2.* In response, Applicants argued that:

...the Examiner failed to identify which component(s) of Xu are purported to constitute the alleged "drop portion," "add portion," "first stage of interleavers" and "final stage" recited in the rejection. The same is likewise true with respect to the rejection of claims 9-11 and 14 – as but one example, the Examiner has asserted that "As to claim 13, channel isolation and suppressed crosstalk is achieved.", but has completely failed to provide any evidence whatsoever in support of that assertion.

Instead, the Examiner has relied on little more than a single vague reference to the Xu figures in support of the rejection of claims 6-11 and 13-14. Thus, the Examiner has left Applicant to guess at which component(s) of Xu are believed by the Examiner to correspond with the elements of the rejected claims. This much, Applicant respectfully declines to do, at least because the Examiner bears the burden of establishing, *prima facie*, the obviousness of the claims.

*Paper filed September 22, 2006, page 8.* In the Final Office Action, the Examiner repeated the rejection of claims 6-11 and 13-14, and further responded to Applicants' argument by asserting that:

Applicant's arguments filed 9/22/2006 have been fully considered but they are not persuasive. In regards to the claim group 6-11 and 13-14, Applicant argues that the Examiner relies on little more than a single vague reference to Xu figures to support the rejection of claims 6-11 and 13-14. Applicant points out this vagueness with respect to the add/drop portions of the invention. Examiner respectfully disagrees. Examiner believes that while terse, the indication of figures is appropriate. As one of ordinary skill in the optical multiplexing or demultiplexing art would be able to determine, for example, in figure 19A, that an add/drop function is taking place.

.....  
Applicant further argues as an example, assertion that channel isolation and suppressed crosstalk by the Examiner lacks evidence. Examiner respectfully disagrees. Again, one skilled in the art would recognize that an interleaver inherently would isolate channels and suppress crosstalk.

.....  
Applicant further argues and recites a quote from MPEP706 noting that Examiner must cite and designate parts applicable to applicant's invention, **if not apparent** (emphasis added). As noted above, Examiner believes that it would be apparent to one of ordinary skill in the art and that one of ordinary skill in the art would be able to recognize from the figures alone and the brief description of the figures in Xu, the claimed features of applicant's invention.

*Final Office Action, pages 2 and 3 (emphasis in original).*

As these statements make clear, the Examiner has consistently failed to specifically identify the component(s) of *Xu* that the Examiner believes to correspond with the elements of the rejected claims, and has instead simply relied on vague references to the art. Moreover, Applicant respectfully submits that the Examiner is mistaken in suggesting that his burden with respect to identification of the claimed features in the cited art is discharged because “...one of ordinary skill in the art would be able to recognize from the figures alone and the brief description of the figures in *Xu*, the claimed features of applicant’s invention.” See *Final Office Action* at 3. *Emphasis added.*

Rather, the Examiner must make the disclosure of such features apparent not to a hypothetical person of ordinary skill in the art but, rather, to the Applicant. The examination guidelines confirm this, stating that “In rejecting claims for want of novelty or for obviousness, the examiner must cite the best references at his or her command. When a reference is complex or shows or describes inventions other than that claimed by the applicant, the particular part relied on must be designated as nearly as practicable. The pertinence of each reference, if not apparent, must be clearly explained and each rejected claim specified.” 37 CFR 1.104. *Emphasis added.* Moreover, “[t]he goal of examination is to clearly articulate any rejection early in the prosecution process so that the applicant has the opportunity to provide evidence of patentability and otherwise reply completely at the earliest opportunity.” MPEP § 706. *Emphasis added.* Clearly, the Examiner has not discharged the burden imposed by these guidelines.

In light of the foregoing, Applicants respectfully submit that the Examiner has failed to establish that the cited references, when combined, teach or suggest all the limitations of the rejected claims.

## **2. Failure to Establish a Suggestion or Motivation to Combine Reference Teachings**

Not only has the Examiner failed to establish that the references, when combined, teach or suggest all the limitations of the rejected claims, but the Examiner has also failed to establish the existence of a suggestion or motivation to combine the purported teachings of the cited references.

### **a. Failure to Establish That *Xu* Does Not Teach Away From the Use of Fused-Fiber Couplers Such as Are Disclosed in *Laming***

In a Paper filed September 22, 2006, Applicants argued that:

As to the purportedly obvious modification and alleged motivation for that combination, the Examiner has conceded that “*Xu* fails to explicitly disclose the use of a ‘fused fiber’ interleaver but does disclose that interleavers are conventionally made by fusing together two optical fibers . . .” and then goes on to assert that “*Laming* teaches a channel add/drop multiplexer using a fused optical fiber coupler to extract (drop) a specified wavelength . . . It would have been obvious . . . to use the fused optical fibers of *Laming* as the interleavers of *Xu* for the motivation of reducing cost, bulk and to lower insertion losses.”

Notwithstanding these allegations by the Examiner, it would appear that, in fact, *Xu* teaches away from the combination proposed by the Examiner. For example, *Xu* discloses a “fused biconical taper (FBT) fiber coupler” about which *Xu* states that “[u]nfortunately, the FBT [fused biconical taper] coupler is only suited for separating channels whose wavelengths are relatively far apart. To achieve the multi-window WDMs or small channel spacing, it is necessary to significantly increase the length of the fused and tapered region, which has presented significant difficulties in manufacturing.” *Col. 2, lines 9-14. Emphasis added.*

In light of this teaching in *Xu*, it seems clear that one of ordinary skill would not be inclined to use the “fused optical fibers” of *Laming* as the interleavers for *Xu*, such as the Examiner has alleged would be obvious to do.

*Paper filed September 22, 2006, page 9 (emphasis in original).* In the Final Office Action, the Examiner responded to this argument by asserting that:

Applicant further argues the basis of Examiner’s motivation and use of the Laming reference, noting that Xu teaches away from the combination proposed by the Examiner. Examiner respectfully disagrees. Xu discloses that fused fiber interleavers are well known.

Finally, Applicant argues that the combination of Xu and Laming teaches away from the combination proposed by Examiner. Examiner respectfully disagrees. Examiner thanks Applicant for pointing out multiple sections of the MPEP, but would like to direct Applicant to MPEP 2142.02, 2143.01, and 2145D. Prior art must be considered in its entirety, including disclosures that teach away from the claims.

As to Xu teaching away from the use of a fused fiber interleaver because of manufacturing difficulties, Laming teaches a fused fiber interleaver that does not appear to result in manufacturing difficulties. Examiner believes this provides proper motivation to use the teachings of Laming in the invention of Xu.

*Final Office Action, page 3.* Notwithstanding these assertions, the Examiner has failed to establish that the *Laming* fused-fiber coupler overcomes the “difficulties” identified in *Xu* as being associated with the fused-fiber couplers that are indicated in *Xu* as being problematic. *See Xu at col. 2, lines 9-14.* That is, the mere assertion that the *Laming* fused-fiber ‘does not appear to result in manufacturing difficulties’ (as characterized by the Examiner) is, without more, simply inadequate to establish that those fused-fiber couplers do not also suffer from the same problems that *Xu* indicates make fused-fiber couplers undesirable.

In light of the foregoing, Applicants respectfully submit that the Examiner has failed to show that *Xu* does not teach away from the use of fused-fiber couplers such as are disclosed in *Laming*. Insofar as the Examiner has failed to make such a showing, the Examiner has failed to establish the existence of a suggestion or motivation to combine *Laming* and *Xu* in the purportedly obvious fashion.

**b. Failure To Establish That The Xu Device Suffers From Such Shortcomings As Could, Or Would, Be Remedied By The Purported Disclosure Of Laming**

As to the purported motivation for the allegedly obvious modification of the *Xu* device with the purported teachings of *Laming*, Applicants note that the Examiner has asserted that “It would have been obvious ... to use the fused optical fibers of Laming as the interleavers of Xu for the motivation of reducing

cost, bulk and to lower insertion losses.” Applicants note however, that the Examiner has failed to establish that the *Xu* device would realize any benefit from the purported disclosure of *Laming*. To the contrary, *Xu* teaches that:

A WDM interleaver in accordance with the present invention provides a high tolerance to wavelength drift, insensitivity to temperature and other environmental changes, and is easy to align, fabricate, and package. Insertion losses are low, and the cascading of stages does not accumulate losses.

*Col. 3, lines 14-20. Emphasis added.* In the absence of any evidence that the *Xu* device would realize an improvement in terms of its size or insertion loss performance, Applicants submit that the Examiner has failed to establish the existence of a suggestion or motivation to make the purportedly obvious combination.

Finally, the Examiner has alleged that one of skill would be motivated to make the allegedly obvious combination in the interest of “reducing cost.” However, this appears to be nothing more than speculation, inasmuch as the Examiner has provided no evidence of the relative costs of these devices.

### 3. Conclusion

In light of the discussion set forth herein, Applicants respectfully submit that the Examiner has failed to establish a *prima facie* case of obviousness with respect to claims 6-11, 13-21 and 23-24, at least because even if the references are combined as the Examiner has suggested would be obvious to do, because the Examiner has failed to establish that the references when combined include all the limitations of the rejected claims, and because the Examiner has not established the existence of a suggestion or motivation to combine the purported disclosure of the cited references.

In view of the foregoing remarks, Applicants respectfully request withdrawal of the finality of the rejection, reconsideration and reexamination of this application, and the timely allowance of the pending claims.

Dated this 11<sup>th</sup> day of April, 2007.

Respectfully submitted,

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